

What were they thinking?

Help Please

Name _____

Date _____

Can you find the mistakes below? Help fix each mistake and explain in words what misunderstanding led to the mistake.

① $(a + 5b)^2$

$a^2 + 25b^2$

② $(8a^2 - 7b^3)(8a^2 + 7b^3)$

$(8a)^4 - (7b)^6$

$4096a^4 - 117649b^6$

③ $-cd^2(3d + 2c^2d - 4c)$

$-3cd^3 - 2c^3d^3 + 4c^2d^2$

$-1c^6d^8$

$$\textcircled{4} \quad \frac{2}{3} a^2 b (6a^3 - 4ab + 9b^2)$$

$$\frac{12}{3} a^5 b - \frac{8}{3} a^2 b + \frac{18}{3} a^2 b^2$$

$$4a^5 b - \frac{8}{3} a^2 b + 6a^2 b^2$$

$$\textcircled{5} \quad 3g(g-4) - 2g(g-7) = g(g+6) - 28$$

$$\begin{array}{r} 3g^2 - 12g - 2g^2 + 14g = g^2 + 6g - 28 \\ -6g \qquad \qquad \qquad -6g \end{array}$$

$$\textcircled{3g^2 - 6g} \quad \textcircled{-2g^2 + 14g} = g^2 - 28$$

$$g^2 - 6g + 14g = g^2 - 28$$

$$\begin{array}{r} -20g = -28 \\ -20 \quad \quad -20 \end{array}$$

$$\textcircled{g = 1.4}$$

$$\textcircled{6} \left(\frac{2x^3 y^2 z}{3x^4 y z^{-2}} \right)^{-2}$$

$$\frac{-4x^{-6} y^{-4} z^{-2}}{-6x^{-8} y^{-2} z^4}$$

$$\frac{6}{4x^{14} y^2 z^6}$$

$$\frac{3}{2x^{14} y^2 z^6}$$

$$\textcircled{7} \left(\frac{q^{-1} r^3}{q r^{-2}} \right)^{-5}$$

$$\frac{q^5 r^{-15}}{q^{-5} r^{10}}$$

$$5-5=0$$

$$-15-10=-25$$

$$\frac{1}{r^{25}}$$